Violence During Pregnancy Among Women With or at Risk for HIV Infection

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Objectives. This study estimated the prevalence of violence during pregnancy in relation to HIV infection.

Methods. Violence, current partnerships, and HIV risk behaviors were assessed among 336 HIV-seropositive and 298 HIV-seronegative at-risk pregnant women.

Results. Overall, 8.9% of women experienced recent violence; 21.5% currently had abusive partners. Violence was experienced by women in all partnership categories (range = 3.8% with nonabusive partners to 53.6% with physically abusive partners). Neither experiencing violence nor having an abusive partner differed by serostatus. Receiving an HIV diagnosis prenatally did not increase risk. Disclosure-related violence occurred, but was rare.

Conclusions. Many HIV-infected pregnant women experience violence, but it is not typically attributable to their serostatus. Prenatal services should incorporate screening and counseling for all women at risk for violence. (*Am J Public Health.* 2002;92:367–370)

Conservative estimates suggest that 4% to 8% of women in the United States experience violence during pregnancy.[1,2] Several factors suggest that risk for violence may be even higher for pregnant women with HIV infection. Women with HIV are at increased risk for violence relative to the general population,[3,4] perhaps because demographic and behavioral factors associated with HIV (e.g., poverty, drug use, bartering sex) also increase a woman's exposure to violence.[5–9] In addition, some HIV-infected women may be at risk for violence when their positive serostatus is disclosed.[10–15] Because a large proportion of HIV infections in women are diagnosed through routine prenatal screening,[16–19] many disclosures may occur during pregnancy. Moreover, modifications of obstetric and postpartum care to prevent perinatal transmission (e.g., additional medications, formula feeding)[20,21] may make it more difficult for women who are pregnant or have recently given birth to keep their serostatus private.

Data collected as part of the Perinatal Guidelines Evaluation Project—HIV and Pregnancy Study were used to examine the prevalence of violence during pregnancy among women with HIV and to ascertain if, and in what way, violence might be related to HIV serostatus. Specifically, seronegative women were matched to seropositive women on a number of demographic and HIV risk characteristics also associated with risk for violence. Owing to concerns that widespread prenatal screening for HIV might inadvertently increase women's risk for negative social consequences such as violence, the impact of receiving an HIV diagnosis during pregnancy was assessed. Finally, the association between recent violence and current partnership category was assessed and, for HIV-infected women, violence associated specifically with partner serostatus disclosure was examined.

METHODS

Between October 1996 and October 1998, pregnant women receiving prenatal care (336 HIV-infected and 298 HIV-uninfected women) were recruited from health departments and clinics in Brooklyn, NY (n=224), Connecticut (n=55), Miami, Fla (n=220), and North Carolina (n=135), either directly or through their providers. All HIV-infected women at participating clinics were eligible. Eligible uninfected women (those receiving services at the clinic and testing negative for HIV during the current pregnancy) were screened and matched (±5%) to HIV-infected women within the same state according to the frequency of the following: sexual transmission risk behavior (ever used crack, had sex with a man known to use or suspected of using intravenous drugs, or traded sex for drugs or money), intravenous drug use, race/ethnicity, and timing of entry into prenatal care. (The cohort and design have been previously described.[22])

Demographic, behavioral, and HIV-related information was collected from women through interviews (in English, Spanish, or Haitian Creole) at 24 weeks or more into the pregnancy. Violence during pregnancy, referred to as recent violence, was assessed by asking women whether they had been "beaten, physically attacked, or physically abused" or "sexually attacked, raped, or sexually abused" by anybody during the past 6 months. Relationship with an abusive partner was categorized by asking women with a main male partner how frequently, when upset, does he "physically abuse or hurt you" or "verbally or emotionally abuse you." Women answering "always," "often," or "sometimes" were considered to have an abusive main male partner. Thus, we measured the proportion of women who experienced acts of violence during the specified period (regardless of perpetrator), or who currently had an abusive intimate partner (regardless of whether a violent act occurred during pregnancy). HIV-infected women were asked, "Does your partner know about your HIV infection?" and "Did anything bad happen when he found out about your HIV?"

RESULTS

Demographic and behavioral characteristics of the HIV-infected sample reflected those of the broader HIV epidemic among women and, with few exceptions, were similar to those of uninfected women (Table 1). Recent violence was reported by 8.9% of women. All

TABLE 1—Demographic, Behavioral, and Violence–Abuse Characteristics for All Women and by HIV Serostatus: Perinatal Guidelines Evaluation Project—HIV and Pregnancy Study

Variable	Total Sample (n = 634)	HIV+ (n = 336)	HIV- (n = 298)	*P*
Demographic/Behavioral Characteristics				
Mean age, y	27.8	28.3	27.2	.04
Race/ethnicity,[a] %				.50
White	7.3	5.9	8.7	
Hispanic	19.9	19.4	20.5	
Black (non-Hispanic)	69.7	71.1	68.1	
Other	3.2	3.6	2.3	
Education, %				.28
< High school	53.6	55.9	51.2	
High school	24.2	24.5	23.9	
> High school	22.2	19.6	24.9	
Monthly household income, %				.52
< $1000	76.0	75.0	77.2	
≥ $1000	24.0	25.0	22.8	
Employment outside the home, %				.74
Yes	21.5	21.0	22.0	
No	78.5	79.0	78.0	
Income sources, %				
Medicaid	86.6	86.0	87.2	.65
WIC	79.4	81.4	77.2	.19
Food stamps	49.8	57.8	40.9	.001
Disability	13.9	21.3	5.7	.001
Public assistance/welfare	29.7	33.2	25.8	.04
Family/partners	74.1	69.8	78.9	.01
No. of times moved in past year (mean)	1.1	0.97	1.24	.05
Gestational age at entry into prenatal care[a]				.61
≥ 20 wk	14.7	14.0	15.4	
< 20 wk	85.3	86.0	84.6	
Sex risk (crack, sex with intravenous drug using male, barter sex),[a] %				.41
Yes	39.3	40.8	37.6	
No	60.7	59.2	62.4	
Drug risk (intravenous drug use ever),[a] %				.09
Yes	4.9	6.3	3.4	
No	95.1	93.7	96.6	
Recent Violence and Partnership Category				
Experienced recent physical or sexual violence,[b] %				.13
Yes	8.9	7.3	10.7	
No	91.1	92.7	89.3	
Has a main male partner,[c] %				.003
Yes	81.8	77.6	86.6	
No	18.2	22.4	13.4	
Characterization of main male partner,[d] %				
Physically abusive	5.5	5.1	5.8	.72
Verbally/emotionally abusive	16.0	14.5	17.4	.36
Nonabusive	78.6	80.4	76.7	.31

Continued

but 1 woman who reported sexual violence also reported physical violence. Most women had a main male partner; 21.5% described their partner as physically or verbally/emotionally abusive. Violence was significantly associated with partnership category (highest for physically abusive, lowest for nonabusive, intermediate for verbally/emotionally abusive or no partner), but almost three fourths of the women who experienced violence were not currently in a relationship with a physically abusive partner (Table 2).

Neither violence nor having an abusive partner differed according to serostatus (Table 1). The proportion of women reporting violence was not higher among the 142 seropositive women diagnosed with HIV during the current pregnancy (5.8%) than among seronegative women (10.7%) or seropositive women with a prior HIV diagnosis (9.4%). Of the 260 HIV-infected women with main male partners, only 206 (79.2%) said that their partner knew their serostatus. Of these, 20 (9.7%) indicated that something bad happened when he found out. One woman was physically assaulted by her partner; 1 woman physically assaulted her partner. Other common negative outcomes included anger, depression, or shock (n=9) and relationship problems or terminations (n=6).

DISCUSSION

Overall, 8.9% of pregnant women in this study experienced recent violence. Although this is only slightly higher than average proportions previously reported,[1] it confirms that violence against pregnant women is a significant public health problem, endangering both the woman and her fetus.[23–32] Extrapolating from the 6000 to 7000 yearly births to women in the United States with HIV,[33] we calculate that violence likely affects somewhere between 528 and 616 HIV-infected pregnant women each year. Although risk for violence did not differ by serostatus, we do not yet know if violence has a different impact on HIV-infected women, who are already at increased risk for adverse birth outcomes,[22,34,35] and who must adhere to complex medication regimens during pregnancy.[21,36]

Moreover, many more women may be at risk for violence and its health-related consequences, as 21.5% of the women in the study

TABLE 1—*Continued*

Experienced recent violence *or* had a physically or verbally/emotionally abusive partner,[e] %				.053
Yes	22.1	19.1	25.5	
No	77.9	80.9	74.5	

Note. WIC = Special Supplemental Nutrition Program for Women, Infants, and Children.
[a]Matched in design.
[b]Recent violence means the woman experienced violence in the prior 6 months. Six women for whom violence data were missing are excluded.
[c]One woman for whom male partner data were missing is excluded.
[d]Categories are mutually exclusive and determined as a hierarchy. Five women with main male partners for whom data on partner abusiveness were missing are excluded.
[e]One woman for whom both violence and partner data were missing is excluded.

currently had an abusive primary partner. Not surprisingly, women with a physically abusive partner were most likely to experience recent violence. However, many women whose partner was not physically abusive, and even those without a partner, experienced violence. This reinforces the need for routine risk assessment in prenatal care settings and for increased awareness that women face risks from ex-partners[5,37,38] and nonpartners,[39] as well as from current partners.

Consistent with other cohort studies of nonpregnant HIV-infected women in which the uninfected comparison women were drawn from demographically and behaviorally similar populations,[3,4,40] neither violence nor having an abusive partner was associated with serostatus. Moreover, receiving a prenatal HIV diagnosis was not associated with elevated risk for violence. Taken together, these findings suggest that violence against HIV-infected women is more likely related to the socioeconomic or behavioral contexts that characterize their lives than to serostatus itself. This is not to say that violence is never related to HIV. One woman was physically assaulted when her partner learned her serostatus. Moreover, many HIV-infected women had not disclosed their serostatus to their partners, and we do not know to what extent this may have been due to fear of violence. Providers must be aware of these risks and concerns when addressing issues of disclosure.[6] However, HIV-infected women's risk for violence may be best addressed by providing access to economic and social services (e.g., financial assistance, substance abuse treatment) that target conditions known to be associated with risk of violence. The prenatal care setting, with its multiple scheduled provider contacts, may provide an important opportunity for identifying and referring women at risk.

These data represent a large and unique sample of HIV-infected and at-risk pregnant women. Nevertheless, certain limitations apply. Women in prenatal care may be at less risk for violence than those not in care. Moreover, by assessing only a 6-month period of time, some incidents of violence during pregnancy may have been missed. At the same time, because we enrolled women as early as 24 weeks into pregnancy, some incidents of violence may have occurred in the weeks just before conception. Future research will want to identify and address risk associated with specific pregnancy periods[41] (e.g., preconception, postpartum) as well as the impact of partnership status on violence during those times. ■

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TABLE 2—Number and Proportion of Women Who Experienced Violence in Prior 6 Months, by Characterization of Current Male Partner

	Experienced Violence in Prior 6 mo						
	Total Sample (n = 623)		HIV-Seropositive Women (n = 325)		HIV-Seronegative Women (n = 298)		*P* (HIV+/HIV− Comparison)
	No, n (%)	Yes, n (%)	No, n (%)	Yes, n (%)	No, n (%)	Yes, n (%)	
Characterization of current main male partner							
Physically abusive	13 (46.4)	15 (53.6)[a]	7 (53.8)	6 (46.2)[a]	6 (40.0)	9 (60.0)[a]	.46
Verbally/emotionally abusive	71 (86.6)	11 (13.4)[b]	33 (89.2)	4 (10.8)[b,c]	38 (84.4)	7 (15.6)[b]	.53
Nonabusive	383 (96.2)	15 (3.8)[c]	195 (97.5)	5 (2.5)[c]	188 (95.0)	10 (5.0)[b]	.18
No main male partner	100 (88.0)	15 (12.0)[b]	66 (88.0)	9 (12.0)[b]	34 (85.0)	6 (15.0)[b]	.65
Total	567 (91.0)	56 (9.0)	301 (92.6)	24 (7.4)	266 (89.3)	32 (10.7)	
Overall χ^2_3 for sample	85.6 ($P < .0001$)		38.5 ($P < .0001$)		11.1 ($P < .001$)		

[a,b,c]Among the 6 pairwise comparisons within each sample (i.e., physically abusive vs verbally/emotionally abusive, physically abusive vs nonabusive, physically abusive vs no main male partner, verbally/emotionally abusive vs nonabusive, verbally/emotionally abusive vs no main male partner, and nonabusive vs no main male partner), proportions in a column not sharing the same superscript letter are significantly different at $P < .008$ (Bonferroni correction for 6 comparisons).

Contributors

L.J. Koenig conceived of the study, with collaboration from all authors, and drafted and finalized the manuscript. D.J. Whitaker analyzed the data with assistance from L.J. Koenig and R.A. Royce. D.J. Whitaker, R.A. Royce, T.E. Wilson, M.R. Callahan, and M.I. Fernandez contributed to the interpretation of the results and to revisions of the paper. R.A. Royce, T.E. Wilson, and M.I. Fernandez directed study activities in their respective cities.

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